

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 03-57								
		<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-08-010	Contract Period 12/16/2008 To 11/30/2012 Base                      Option Period Number 3	Title of Work Assignment/SF Site Name Sustainable Electronics Forum								
Contractor SCIENTIFIC CONSULTING GROUP, INC, THE		Specify Section and paragraph of Contract SOW 2.1, 2.2, 2.3, 2.4								
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From 05/14/2012 To 11/30/2012								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO (Max 2) <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period: 12/16/2008 To 11/30/2012		Cost/Fee:				LOE:				
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:		Cost/Fee:				LOE:				
Cumulative Approved:		Cost/Fee:				LOE:				
Work Assignment Manager Name    George Moore						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number 513-569-7991				
						FAX Number:				
Project Officer Name    Verla Sutton-Busby						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-564-6808				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name    Renita Tyus						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 513-487-2094				
						FAX Number: 513-487-2109				

## PERFORMANCE WORK STATEMENT

**EPA CONTRACT NUMBER:** EP-C-08-010

**WORK ASSIGNMENT NUMBER:** WA# 03 - 57

---

- 1. TITLE:** Sustainable Electronics Forum
- 2. ESTIMATED PERIOD OF PERFORMANCE:** From the date of the Contracting Officer's signature until November 30, 2012
- 3. EPA WORK ASSIGNMENT COR:** George Moore  
U.S. EPA -MS 483 26 West Martin Luther King Drive Cincinnati, Ohio 45268  
[Moore.George@epa.gov](mailto:Moore.George@epa.gov)  
513-569-7991
- 4. ALT WORK ASSIGNMENT COR:** Ahjond Garmestani  
U.S. EPA -MS 443 26 West Martin Luther King Drive Cincinnati, Ohio 45268  
[Garmestani.ahjond@epa.gov](mailto:Garmestani.ahjond@epa.gov)  
513-569-7856
- 5. PROJECT OFFICER:** Verla Sutton-Busby  
US EPA (8102R)  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460  
[Sutton-busby.verla@epa.gov](mailto:Sutton-busby.verla@epa.gov)  
202-564-6808
- 6. BACKGROUND AND PURPOSE:**

Electronic technologies have been growing rapidly in the last four decades. Americans currently own more than 3 billion electronic products that have become critical to our way of life and to our growing economy. However, as the average use-life of electronic products gets shorter, obsolete products are stored or discarded at alarming rates, creating new challenges in the management of wastes, a.k.a. e-waste. About two-thirds of the electronic devices removed from service are still in working order. Americans now discard more than 400 million electronic items per year; less than 20 percent is recycled, while 85 percent ends up in landfills (U.S. EPA, Office of Solid Waste and Emergency Response, 2008).

E-waste poses challenges distinct from many other types of waste due to its content. Most electronics products contain hazardous materials such as lead, cadmium, mercury, hexavalent

chromium, plastics (including PVC), brominated flame retardants (BFR), barium, and beryllium (Lincoln et al. 2007, Musson et al. 2000, and Musson et al. 2006). E-waste represents 2 percent of America's trash in landfills, but it equals 70 percent of all toxic waste. Therefore, there are risks to human health associated with placing such products into landfills or incinerators where these hazardous elements can enter air and water streams. E-waste poses an increasing challenge of protecting human health and the environment from the harmful effects associated with the unsafe handling and disposal of these products. The existing system for managing e-waste is generally not sustainable; mechanisms for collecting, sorting, reuse, refurbishing, repairing, and remanufacturing are not well developed and/or implemented. Problems associated with market issues, obsolescence issues, e-waste collection and processing, and product-design need to be addressed. Given the complexity, uncertainty, and diversity of the e-waste problem, a rigorous multidisciplinary academic approach is necessary to develop and implement systems that effectively utilize and recycle these products.

Innovative, flexible, and pragmatic electronics design and manufacturing could drive energy savings, emissions reduction, and resource conservation transformations in the industry. Integrated solutions in electronics manufacturing and recycling would allow Americans to manage the electronics we use today more sustainably, while simultaneously promoting the new and innovative technologies of the future to meet market challenges.

The Sustainable Technology Division (STD) is a component of the National Risk Management Research Laboratory (NRMRL). The mission of the STD is to advance the scientific understanding, development, and application of technologies and methods for the prevention, removal, and control of environmental risks to human health and the ecology. The U.S. EPA/NRMRL, in conjunction with its co-sponsors, will organize a forum of multi-stakeholder groups, including electronic product designers, refurbishers, recyclers, non-governmental organizations (NGOs), and academic and other technical experts to address major research challenges and policy issues that enhance sustainable management of electronics products.

The objective of this Performance Work Statement is to bring together a collection of leaders in the electronics industry for a multi-stakeholder workshop to determine the major challenges in addressing e-waste issues from a research and design perspective. After determining both the challenges, as well as the technological hurdles, the EPA will be positioned to propose a research agenda that is aligned with real-world issues associated with e-waste.

The goals of the multi-stakeholder workshop are to:

- Develop a shared vision of what truly sustainable electronics should look like, and provide clear end-goals for design standards development.
- Promote the integration of end-of-life considerations into front-end product designs.

- Extend the useful life of electronic products, and assess the optimal amount of time to keep products in operation.
- Support the creation of environmental criteria for refurbished equipment.
- Address other high-priority questions and challenges identified by the stakeholder community.

## 6. PERFORMANCE WORK STATEMENT:

The Contractor shall acquire the facilitators, industry experts, and other resources necessary to perform the tasks set forth below for the 2012 Sustainable Electronics Forum being co-sponsored by the EPA, the General Electronics Council (GEC), and the Johnson Foundation at Wingspread. **The two-day Forum is anticipated to take place in or around October of 2012, and it is anticipated to have up to 50 attendees (Contractor experts and facilitators, EPA staff, the other co-sponsors' staff, and other interested stakeholder attendees).** As a co-sponsor, The Johnson Foundation will provide the meeting facilities for the Forum, along with all audio/visual and technological support during the Forum. The Contractor shall perform the tasks set forth, inclusive of the coordination necessary to utilize the meeting facilities, audio/visual and technological support of the Johnson Foundation at Wingspread for the Forum. The Contractor shall communicate with the EPA WA COR within five (5) days of approval of the Work Assignment to determine if a meeting is necessary prior to submission of the Work Plan. If such a meeting is required, a Technical Directive (TD) will be issued by the EPA WA COR.

The Contractor shall prepare a Work Plan. The plan shall include the methodology to be used for each task. The Contractor shall provide intermediate milestone dates by task, in accordance with the guidance provided by the EPA. The EPA Contracting Officer (CO) will approve the work plan in writing. The CO must also approve any subsequent modifications to the work plan.

### Task 1. Forum Preparation Activities

#### Task 1A. Forum Facilitators

The Contractor shall identify, interview, and select a team of professional senior facilitators to act as conveners for the Sustainable Electronics Forum. **The EPA anticipates that up to four facilitators will be needed for this two-day Forum.** These facilitators shall have the following experience, skills, knowledge, and/or educational background: past experience in conducting stakeholder assessment and process design for sustainable road mapping; knowledge, skills, and experience in a range of stakeholder engagement processes, including back casting and sustainability principles; and past experience in sustainable electronics and related products. Life cycle assessment and/or experience with e-waste management is highly desirable.

In addition, the facilitators shall demonstrate the ability to fulfill the following responsibilities.

1. Organize and deliver advance activities that shall stimulate and prepare participants to think big, think long term, and think in specifics, not generalities, regarding sustainable Information and Communication Technology (ICT).
  - Interview participants and other individuals who have valuable contributions to make to the topic(s) at hand and bring that information to the Forum.
  - Provide thought and focus pieces to participants in advance of the scheduled Forum so that they arrive prepared to think big and long term.
2. The key responsibility of the facilitator(s) during the Forum shall be to stimulate and manage the flow of discussion so that key topics are well developed in discussion and the full range of viewpoints is expressed. However, this does not imply bringing the participants to consensus. This shall include:
  - Working with the EPA and the other Forum co-sponsor team members to provide a method to focus the discussion around challenging and constructive ICT sustainability themes.
  - Assuring that participant ideas are developed and examined to the extent that time allows. Often groups of this size jump from topic to topic and lack the continuity to develop ideas. The Forum shall be facilitated in such a way that the group develops key topics and ideas by examining them from different perspectives.
  - Assuring respect for all participants and all ideas, and managing the constructive exploration of disagreements and conflict. It is certain that participants will bring a wide range of sometimes conflicting viewpoints and values, and many have engaged in conflict in the past.
  - Raising the conversation to the long term principles of sustainable ICT, if it becomes entrapped in concerns for present-day practical realities.
3. A thorough and true record shall be kept of all discussions so that a clear vision of sustainable ICT, and an actionable roadmap can be produced following the Forum that accurately represents the ideas presented and developed there.

The facilitators shall meet within 10 days of Contractor selection with the Contractor and the EPA WA COR, to discuss substantive and procedural issues. At this meeting the EPA WA COR shall provide more detailed information concerning the goals of and outcomes expected from the Forum, as well as a list of potential parties to be included in the Forum, and a list of issues to be addressed through the Forum. All contract-related communications pertaining to the Contractor's facilitators shall be provided by the EPA WA COR, and/or CO to the prime Contractor, in accordance with the subject Work Assignment (WA) and the terms and conditions of the prime Contractor's contract. No "direction" will be provided directly to subcontractors/consultants. WA communications pertaining to work being performed by subcontractors/consultants **shall go through the prime Contractor.**

#### **Task 1B. Expert Identification**

The Contractor shall identify, interview, and select national and international experts in sustainable electronics design, manufacturing, and e-waste management. The EPA, after consultation with its co-sponsor, the GEC, anticipates up to 30 experts will be needed for this Forum. These experts shall be from industry, academia, NGOs, and government. The Contractor's subject matter experts shall be from fields of expertise required by the design of the Forum, including eco-design and green supply chain management, optimum life cycle utilization; and reuse, recycle and sustainable waste management.

The Contractor shall communicate the goals and purpose of the Forum, the technical or substantive issues involved the structure of the Forum, and the timing and schedule for the Forum. The EPA WA COR shall provide a list of **credentials** the potential experts must possess. The EPA WA COR, and the GEC through the EPA WA COR, will provide a list of potential sources for the Contractor's consideration. The Contractor shall determine which experts to contract with. The Contractor shall submit its draft list of expert selections for the EPA WA COR's approval. The Contractor shall demonstrate its experts' capabilities, and their availability to perform at the Forum. The Contractor shall detail the experts contacted and committed. After the Contractor has made its selections, it shall perform a second interview to determine the experts' recommendations for the Forum agenda. The Contractor shall provide a compilation of its experts' recommendations, and the Contractor's final recommendation to the EPA WA COR.

## **Task 2. Forum Preparation Plan**

After Task 1 is complete, the Contractor shall develop a Forum Preparation Plan. The Plan shall include the following elements:

Structure of the Forum, including subgroup and breakout meetings. The Contractor shall work with its facilitators and experts to develop a draft agenda and design for the Forum. The EPA WA COR will approve the final Agenda.

- (1) Location of the meeting. The Contractor shall coordinate use of the Johnson Foundation at Wingspread's facilities in Wisconsin for the Forum. The Contractor shall ensure the meeting facilities, equipment, and the support for all the meetings of the plenary group, the subcommittees, and any resultant workgroup breakout sessions are set up.
- (2) Coordinate the date and schedule for the meeting October 2012 is the preferred schedule for the event. The date and schedule for the Forum is subject to the EPA WA COR's approval.
- (3) Plan the web site content announcing the meeting. The EPA and its cosponsors will announce the program on their respective websites utilizing Contractor prepared content. The web site content for the Forum is subject to the EPA WA COR's approval. The Contractor shall direct interested attendees to the EPA's and the Co-sponsors' websites for the meeting announcement information. The Contractor shall not be required to post the information separately.
- (4) Provide all necessary research, data, or information prior to, during, and after the Forum. This includes any information needed to plan the meeting and shape the final agenda. Research, data, or information that is necessary is not confined to just those

periods prior to or during the Forum, but shall include any follow up tasks the Contractor is required to perform.

- (5) Plan and coordinate "remote access" capabilities at the facility for any interested stakeholders, such as EPA's Regional Offices or Co-sponsors' staff, who may be interested in the Forum but are unable to attend in person.
- (6) Recommend whether an orientation session would be beneficial prior to the Forum.
- (7) Develop draft and final documentation of the discussion topics, inclusive of the resolution of any comments for the EPA WA COR's approval.

***The Contractor shall coordinate these activities with the EPA's co-sponsors, the GEC and the Johnson Foundation at Wingspread in Wisconsin, to avoid redundancy and duplication of efforts.***

The EPA WA COR will review the draft Forum Preparation Plan and provide comments and revisions as necessary on the facts, as well as questions and/or thoughts regarding the Contractor's recommendations. The Contractor shall prepare the final Forum Preparation Plan, addressing and incorporating the WA COR's revisions.

The Contractor shall distribute the final Forum Preparation Plan to the EPAWA COR (2 copies total).

### **Task 3. Forum Progress Reports**

The Contractor shall provide verbal status reports weekly to the EPA WA COR, and one written final progress report one week prior to the Forum to demonstrate that all facilitators, experts, facilities, and logistics and tasks are established for the conduct of the Forum.

### **Task 4. Development and Distribution of the Final Agenda**

Prior to the Forum and upon receipt and incorporation of the EPA WA COR's comments, the Contractor shall distribute the final agenda to the EPA WACOR its facilitators and experts, the co-sponsors, and other interested stakeholders who have expressed an interest in attending the Forum in person or through "remote access." The EPA WA COR will advise the Contractor of the attendance of any interested stakeholders that have contacted the EPA WA COR and/or the other co-sponsors. Prior to the Forum, the Contractor shall communicate in person, by telephone, and/or in writing with its facilitators and experts to ensure that all issues and concerns have been communicated accurately, and they are adequately prepared for the meeting.

### **Task 5. Implementation of Forum Preparation Plan**

At the Forum, the Contractor shall facilitate all Forum sessions, discussions, and conference calls. The Contractor or its facilitators shall assist Forum participants articulate their ideas and suggestions, identifying areas of agreement, and developing pragmatic, consensus solutions to the identified challenges. The facilitators shall keep the parties talking, listening, and engaged in moving towards the goals of the Forum, to the extent possible.

After the conclusion of the Forum, the Contractor shall provide draft meeting summaries, inclusive of a roadmap for action based on Forum information, to the EPA WA COR for approval and coordination of comments from EPA's co-sponsors. Upon receipt and incorporation of the comments, final meeting summaries and a final roadmap for action shall be provided to the EPA WA COR, the other co-sponsors, and interested stakeholders in attendance in person or through remote access. The EPA WA COR and the other co-sponsors may separately post the final meeting summaries to an EPA website or docket and/or the other co-sponsors' websites. The EPA cosponsor, GEC, will be responsible for the assignment of any leads for action items documented in the roadmap for action.

In addition to final meeting summaries, the Contractor shall provide a draft final report on the Forum to the EPA WA COR (two copies total). That draft final report may be submitted in electronic format. The contents shall include:

- (a) A two-page executive summary of the Forum, including the background, the issues discussed, the resolutions of the issues, the participants involved, and follow-up activities to be accomplished
- (b) A mailing list of the Forum attendees and stakeholders that were in attendance in person and through remote access.
- (c) A detailed budget for the Forum. This budget shall be by labor categories. It shall also be subdivided into Forum preparation activities, expenses incurred during the Forum, and expenses incurred after the Forum, detailing the labor hours and costs associated with each task. The other direct costs (ODC) shall show the total costs for: the travel of the facilitators and experts, communications costs inclusive of any courier service, such as Fed X/UPS, telephone, fax, mail, etc.
- (d) A process evaluation by the facilitators, summarizing the results of the Forum, analysis of issues, procedural lessons learned, and recommendation for improvements in the process for future reference.
- (e) The Contractor's facilitators shall obtain feedback from the participants at the conclusion of the Forum to evaluate the overall effectiveness of the Forum and the achievement of stated goals, the performance of the Contractor and the Forum co-



sponsors, the way the meeting was conducted, and recommendations for improvement.

The EPA WA COR will review the draft final Forum report, with input from the GEC, and provide comments and revisions to the Contractor as necessary. The Contractor shall prepare the final Forum report incorporating comments and revisions provided by the EPA. The Contractor shall provide in an electronic format, such as a CD, two copies of the final Forum report to the EPA WA COR, and one copy to each co-sponsor and each participant involved in the Forum in person and via "remote access".

## 7. SCHEDULE OF DELIVERABLES:

The Contractor shall send all draft and final summary and Forum reports, as set forth herein, to the EPA WA COR. The work plan shall be provided in accordance with contract terms and conditions. Upon receipt of comments on the work plan from the EPA WA COR, the Contractor shall revise the work plan in accordance with the contract.

---

Schedule:

<u>Item:</u>	<u>Due No Later Than:</u>	<u>Type of Report:</u>
<b>Task 1.</b>		
Work Plan	In accordance with the contract Terms and Conditions	Written
<b>Task 2. Forum Preparation Plan</b>		
Draft Forum Prep. Plan	4 weeks before meetings	Written
Final Forum Prep. Plan	3 weeks before meeting	Written
<b>Task 3. Forum Progress Reports</b>		
Verbal Progress Reports	Weekly	Verbal
Final Forum Progress Report	1 week before meeting	Written
<b>Task 4. Development and Distribution of Final Agenda</b>		
Distribution of Forum Agenda	2 weeks before meeting	Written
<b>Task 5. Implementation of Forum Preparation Plan</b>		
Post Forum Survey	2 weeks after the Forum	Written
Draft meeting summaries and Roadmap of actions	6 weeks after the Forum	Written
Final meeting summaries and Roadmap of actions	4 weeks from receipt of EPA comments	Written
Draft Final Forum Report	12 weeks after the Forum	Written
Final Forum Report	2 weeks from receipt of EPA comments	Written

---

## **8. WORK APPROACH**

The Contractor shall perform all required tasks in accordance with the requirements outlined herein and in accordance with the terms of the basic contract. The Contractor shall take direction from the EPA WA COR.

In gathering information or performing research with parties outside of the EPA, Contractor personnel shall identify themselves as Contractor personnel working for the EPA, not as EPA employees.

**The Contractor shall provide input or make recommendations based on the information it has gathered. However, decisions on all substantive issues shall be made by the EPA WA COR .**

**THE CONTRACTOR SHALL NOTIFY THE EPA CO WHEN 75% OF THE FUNDS PROVIDED HAVE BEEN EXPENDED OR WHEN FUNDING FOR LESS THAN 6 WEEKS OF WORK REMAINS.** Notifications shall be in writing, with a copy to the EPA WA COR AND EPA PO

### **TRAVEL:**

Per the contract clause Local LC-31-08, Approval of Contractor Travel, any non-local travel directly chargeable to this work assignment shall be submitted and approved by the Project Officer COR prior to the travel. It is anticipated that the contractor will travel to the October 2012 2 day Forum.

### **MANAGEMENT CONTROLS:**

Periodic meetings between the EPA and contractor work assignment managers are encouraged to discuss any questions that may arise during performance or completion of this work assignment. At the EPA WA COR's discretion, these meetings may occur via teleconference or video conferences. The contractor shall document these meetings and submit copies of this correspondence to the EPA WA COR.

The EPA WA COR may identify one or more EPA technical representatives for this work assignment. Interaction between the contractor and any EPA technical representative(s) designated by the EPA WA COR is solely for the purpose of presenting and discussing the information, analyses, results, or presentations related to this work assignment. The interaction will be technical communication vice technical direction. Per the technical direction clause EPAAR 1552.237-71 of the contract, the EPA PO COR and the EPA WA COR or alternate EPA WA COR are the only representatives of the CO authorized to provide technical direction.

Per the technical direction clause, the CO and PO will be provided with copies of all technical direction.